

## Integration Work Sheet (IWS)

IWS \_\_\_\_\_ ☐ SP attached \_\_\_\_\_ Title: \_\_\_\_\_

### PART I ADMINISTRATIVE INFORMATION *(completed by RI)*

**Management Chain:** Name of Responsible Individual (RI), Alternate RI, names of line managers between the RI and Authorizing Individual (AI), name of AI, name of the Authorizing Organization and title of AD \_\_\_\_\_

Location	Facility	Room(s)	FPOC	ES&H Team	Intended Start Date: <input type="checkbox"/> or to be determined
					Est. Completion Date: <input type="checkbox"/> or ongoing

**Employees (E) & Guests (G) assigned to this activity:**

Name	E or G	Employee #	Name	E or G	Employee #

### PART II SCOPE OF WORK & SP *(completed by RI)*

**Scope of Work:** Describe the work activity, emphasizing the safety aspects of the work (not the scientific basis) and the use of hazardous material.  
☐ Scope of work attached

**Safety Plan (SP)**—Is there a current SP (SP form or OSP or FSP) covering this work? ☐ Yes- attach# \_\_\_\_\_

☐ New SP needed—attach \_\_\_\_\_ ☐ SP not needed (see ES&H Manual Doc 2.2 App. A)

\*Is this IWS for Chemical Hygiene work only? ☐ Yes ☐ No

\*Does this apply to all locations? ☐ Yes ☐ No \*If No, list locations it does not apply to: \_\_\_\_\_

### PART III HAZARDS/ENVIRONMENTAL ASPECTS & CONTROLS *(completed by RI)*

**Hazards/Environmental Aspects and Controls:** Check off the hazards involved in the work.

☐ **Biological** ☐ Infectious materials/other biohazards (pathogens, human fluids protein toxins, recombinant DNA, exposure to sewage) ☐ Sharps/ needles  
☐ Human use experiments ☐ Lab animals ☐ Other animals (wild, domestic, insects) ☐ Toxic plants ☐ Food for humans  
☐ Other biological \_\_\_\_\_

☐ **Chemical (Hazardous Material)** ☐ Flammable, volatile or fuming ☐ Toxic materials (acutely toxic, toxic, systemic toxin, toxic gases) ☐ Corrosives /irritants ☐ Reactive materials (e.g., air/water sensitive; pyrophoric; thermally, shock, or friction sensitive; perchlorate) ☐ Carcinogens, mutagens, reproductive hazards ☐ Pesticides ☐ Beryllium ☐ Materials of special concern (e.g., alkali metals, fluorine, asbestos, lead, mercury, PCB) ☐ Other regulated metals (e.g., chromium, copper, nickel, zinc) ☐ Other chemical \_\_\_\_\_

☐ **Construction/Equipment/Working Surfaces** ☐ Construction, maintenance, modification, demolition ☐ Asbestos removal ☐ Safety system maintenance (deactivated alarms, interlock bypass) ☐ Drilling ☐ Working on contaminated equipment ☐ Service, maintenance, or modification of de-energized equipment ☐ Moving/lifting large or heavy items (including use of cranes/hoists, powered lift) ☐ Machine tools/powder-actuated tools ☐ Welding, soldering, thermal cutting ☐ Stored potential energy ☐ Sharp edges/ shears ☐ Pulleys, belts, gears, pinch points ☐ Walking/working on irregular surfaces  
☐ Work at heights > 6 ft ☐ Roof access ☐ Steep or slippery terrain ☐ Soil disturbance, excavating, grading, and disposal  
☐ Other construction/equipment/working surfaces \_\_\_\_\_

☐ **Discharges to Air** ☐ Produces criteria pollutants (e.g., organics, NOx, ozone, outdoor dust) ☐ Source regulated by Air District ☐ Hazardous Air Pollutants (e.g., beryllium, radioactive materials used) ☐ Solvents, adhesives, coatings ☐ Exhaust ventilation ☐ Potential to emit other air pollutants  
☐ Greenhouse gas emissions ☐ Other discharges to air \_\_\_\_\_

☐ **Discharges to Water/ Soil/ Groundwater** ☐ Discharge of process water to sanitary sewer or septic system ☐ Discharge to ground/soil or storm drain system ☐ Connection to retention tank, percolation pits ☐ Categorical process (e.g., metal finishing, electronics) ☐ Discharge to arroyo or other surface water ☐ Other discharges to water/soil/groundwater \_\_\_\_\_

☐ **Ecological and Cultural Resources** ☐ Disturbances to soils, drainage channel, stream bed, floodplain, natural habitats, wetlands, buffer zone, other undisturbed area (ecological) ☐ Work in area designated as having cultural or paleontological resources ☐ Work in area designated as sensitive habitat (ecological) ☐ Other ecological and cultural resources \_\_\_\_\_

☐ **Electrical** ☐ Batteries (short circuit >10 A or >50 V) ☐ Capacitors (>10 J electrical energy) ☐ Electrical power source (>140 V or > 30 A or >10 J of electrical, or 2 or more sources of electrical power) ☐ Energized electrical equipment (work on exposed, energized electrical equipment >50 V, 20 A, or portable equipment at other than ground potential) ☐ Static electricity ☐ Hi-potential testing (>500 V) ☐ Other electrical \_\_\_\_\_

☐ **Emergencies/Earthquakes/Fire** ☐ Potentially unique emergency issues ☐ Unique earthquake safety issues ☐ Unique fire safety issues  
☐ Spill/Release of hazardous and/or radioactive constituents ☐ Other emergencies/earthquakes/fire \_\_\_\_\_

☐ **Explosives/Firearms** ☐ Explosives, high explosives, propellants, pyrotechnic or similar energetic material ☐ Mock explosive ☐ Firearms  
☐ Other explosives/firearms \_\_\_\_\_

☐ **Pressure/Noise/Hazardous Atmospheres** ☐ Low Pressure systems <150 psig-gas, <1500 psig liquid, <100 kJ stored energy ☐ High pressure system >150 psig -gas or >1500 psig liquid ≥100 kJ stored energy ☐ Pressure systems containing hazardous fluids ☐ Vacuum systems ☐ Cryogenics  
☐ Noise (> 85 dB) ☐ Confined spaces/ oxygen deficiency, asphyxiant ☐ Hazardous atmospheres  
☐ Other pressure/noise/hazardous atmospheres \_\_\_\_\_

\* For optional Team Industrial Hygienist use only. Not integrated into e-IWS system at this time.

## Integration Work Sheet (IWS)

### PART III HAZARDS/ENVIRONMENTAL ASPECTS & CONTROLS *(continued)*

<input type="checkbox"/>	<b>Radiation- Ionizing/Non-ionizing</b>	<input type="checkbox"/> Radioactive material (encapsulated, non-encapsulated)	<input type="checkbox"/> Fissionable material in excess of Table 1 in ES&H Manual Doc 20.6	<input type="checkbox"/> Radiation-generating devices (RGD) (accelerator, x-ray machine, e-beam, high voltage in a vacuum)
<input type="checkbox"/>	<input type="checkbox"/> Non-ionizing radiation- class 3a – unattended or invisible, 3b, or 4 lasers, or intense UV, visible, or infrared illumination <input type="checkbox"/> Electric/ magnetic fields < 3 kHz			
<input type="checkbox"/>	<input type="checkbox"/> Radio frequency/microwaves sources > 3 kHz <input type="checkbox"/> Emission to atmosphere <input type="checkbox"/> Other radiation-ionizing/non-ionizing _____			
<input type="checkbox"/>	<b>Remediation and Monitoring</b> <input type="checkbox"/> Grading or excavating in contaminated areas <input type="checkbox"/> Movement/disposal of soil <input type="checkbox"/> Disturbing contaminated groundwater			
<input type="checkbox"/>	<input type="checkbox"/> Other remediation and monitoring _____			
<input type="checkbox"/>	<b>Storage Tanks</b> <input type="checkbox"/> Wastewater retention tank <input type="checkbox"/> Tanks storing materials/products <input type="checkbox"/> Other storage tanks _____			
<input type="checkbox"/>	<b>Temperature/Weather</b> <input type="checkbox"/> Extremely hot or cold surfaces, steam (burn hazard) <input type="checkbox"/> Weather exposure or temperature extremes (harsh weather, lightning, temperature extremes) <input type="checkbox"/> Exposure to intense sunlight <input type="checkbox"/> Other temperature/weather _____			
<input type="checkbox"/>	<b>Transportation</b> <input type="checkbox"/> Hazardous material or waste transportation <input type="checkbox"/> Radioactive material or waste transportation <input type="checkbox"/> Transportation of material between sites			
<input type="checkbox"/>	<input type="checkbox"/> Use of vehicles (aircraft, ATV, boat) <input type="checkbox"/> Off-road driving <input type="checkbox"/> Other transportation _____			
<input type="checkbox"/>	<b>Waste</b> <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Radioactive waste (TRU, LLW)			
<input type="checkbox"/>	<input type="checkbox"/> Mixed waste or other waste with no disposal option			
<input type="checkbox"/>	<input type="checkbox"/> Medical or Biohazardous Waste <input type="checkbox"/> Non-Regulated Biological (NRB) <input type="checkbox"/> Municipal wastes			
<input type="checkbox"/>	<input type="checkbox"/> Industrial waste <input type="checkbox"/> Material for recycling <input type="checkbox"/> Other waste _____			
<input type="checkbox"/>	<b>Worker Capability/Motion</b> <input type="checkbox"/> Lifting manually >30 pounds <input type="checkbox"/> Work involving repetitive motion <input type="checkbox"/> Hand tools <input type="checkbox"/> Work alone <input type="checkbox"/> Work after hours			
<input type="checkbox"/>	<input type="checkbox"/> Work involving individuals <18 years of age <input type="checkbox"/> Work requiring specific unusual physical capabilities <input type="checkbox"/> Other work capability/motion _____			
<input type="checkbox"/>	<b>Natural Resources</b> <input type="checkbox"/> Water Use (in industrial, experimental, process activities) <input type="checkbox"/> Electrical Energy Use			
<input type="checkbox"/>	<input type="checkbox"/> Nonhazardous Material use (metal stock, paper, plastic, glass, etc.)			
<input type="checkbox"/>	<input type="checkbox"/> Land Use/Land Management <input type="checkbox"/> Fossil Fuel consumption			
<input type="checkbox"/>	<input type="checkbox"/> Other _____			
<input type="checkbox"/>	<b>Other Hazards and Environmental Aspects</b> <input type="checkbox"/> Other Hazards and Environmental Aspects _____			

**Hazard Description and Controls:** Describe each hazard listed above and the specific controls: (engineered controls, personal protective equipment, etc. State if Chemical Hygiene, etc.)

**Hazard Description**

**Control**

**Training:** List the required training and the individual requiring the training by name

Name	Employee #	Course#

### PART IV SITE LOCATION/DIRECTORATE ADDITIONS

**Site Location/Directorate-Specific Additions:** Site location (e.g., S-300, NTS, off-site) or Directorate-specific additions can be added here.

### PART V ES&H DOCUMENTS/PERMITS/APPROVALS MEDICAL SURVEILLANCE

**ES&H Documents / Permits / Approvals / Medical Surveillance:** The following controls are required:

<input type="checkbox"/>	ES&H Documents needed: <input type="checkbox"/> IWS only-(WAL B) <input type="checkbox"/> IWS & Safety Plan- (IWS/SP-WAL C) <input type="checkbox"/> Other ES&H Documents: _____
<input type="checkbox"/>	LLNL Work Permits/Approvals: _____
<input type="checkbox"/>	Agency Work Permits/Approvals: _____
<input type="checkbox"/>	Medical Surveillance/Certification: _____

### PART VI SIGNATURES

As the RI, I have reviewed the hazards and agree to implement the controls identified in this IWS:

**Responsible Individual (RI):** \_\_\_\_\_ **Date:** \_\_\_\_\_

The proposed work falls within the safety envelope of the facility/area and may commence once authorized:

**FPOC Concurrence** \_\_\_\_\_ **Date:** \_\_\_\_\_

**FPOC Concurrence (if required)** \_\_\_\_\_ **Date:** \_\_\_\_\_

I have reviewed the hazards and controls for this work and concur that the work may commence once authorized:

**Site Location/Directorate Specific Concurrence (if required)** \_\_\_\_\_ **Date:** \_\_\_\_\_

The hazards and controls have been properly identified and the work may commence once authorized (Note: ES&H Team or designee concurrence is required for WAL B; ES&H Team concurrence is required for WAL C.)

**ES&H Concurrence:** \_\_\_\_\_ **Title:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Approval:** The controls have been confirmed and this proposed activity is authorized to proceed.

**Authorizing Individual (AI)** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Integration Work Sheet (IWS)

To be completed by the ES&H Team or their Designee or the RI (Transfer information on the checked items to Part V of the IWS form)


### ES&H Documents:

- ☐ **IWS only needed** (WAL B- ES&H Team or designee concurrence required)
- ☐ **IWS & Safety Plan (IWS/SP) needed** (WAL C - ES&H Team concurrence required)
- ☐ **Other ES&H Documents needed:**

- ☐ Safety Basis document update needed (e.g., USQ or other)
- ☐ Engineering safety note needed
- ☐ NEPA document needed
- ☐ Job Hazard Analysis needed (JHA) \_\_\_\_\_
- ☐ Other \_\_\_\_\_

Attach required documentation or list where the documents can be found: \_\_\_\_\_

### LLNL Permits/Approvals/Consultations/Reporting:

- ☐ Building and/or equipment drain
- ☐ Interior concrete floor, wall, and ceiling penetration
- ☐ Asbestos permit
- ☐ Confined space permit
- ☐ Hot work
- ☐ Hazardous work permit (ES&H Manual Doc. 17.1 Sec. 3.18)
- ☐ Lead work
- ☐ Radiation work permit
- ☐ Roof access
- ☐ Soil excavation, grading (dig permit), and/or drilling permit
- ☐ CMID tag needed
- ☐ Soil movement/disposal
- ☐ Preconstruction, site evaluation request form
- ☐ Radioactive waste (Lifecycle planning)
- ☐ Pollution Prevention evaluation needed
- ☐ Energy efficiency or water conservation analysis needed
- ☐ Significant environmental aspect(s) identified  Optional text: \_\_\_\_\_
- ☐ LLNL Committee approval (committee name) \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

### Agency Work Permits/Approvals:

- ☐ Air district notification for asbestos and/or demolition
- ☐ Air permit/exemption
- ☐ NESHAP
- ☐ Waste permit/exemption
- ☐ Water discharge permit/exemption
- ☐ Fish and Wildlife consultation
- ☐ Other: \_\_\_\_\_

### Medical Surveillance/Certification:

- ☐ Asbestos worker
- ☐ Beryllium associated worker-1 (potential exposure 10 days or more/year)
- ☐ Beryllium associated worker-2 (potential exposure less than 10 days/year)
- ☐ Future Beryllium associated worker (no current exposure, but potential future exposure)
- ☐ Works with Biohazards
- ☐ Works with Carcinogens
- ☐ Hazardous Waste worker
- ☐ Hearing Conservation required
- ☐ Lead handler
- ☐ Commercial Drivers License required
- ☐ Crane Operator
- ☐ Explosives worker
- ☐ Firefighter
- ☐ Laser Eye exposure potential
- ☐ Respirator required
- ☐ PAP ☐ PSAP ☐ PSO \_\_\_\_\_
- ☐ Other: \_\_\_\_\_